

ELECTRONIC TUBE REFERENCE

6HZ6

Voltage - Radio Detector Converter electronic tube

CONSOLIDATED TECHNICAL DATA

1 SECTION
CONSTRUCTION
PENTODE

Dual-control miniature pentode designed for FM sound-detector service in color and monochrome television receivers. Two independent control grids provide separate influence over plate current for specialized detection.

GENERAL CHARACTERISTICS

BASE DESIGNATION	7EN	BASE PINS	7
NOMINAL HEATER	6.3 V / 450 mA	PARALLEL HEATER	– / –
HEATING	Indirect	SERIES OPERATION	Not specified
CATHODE ARRANGEMENT	Separate cathodes	SECTION CONSTRUCTION	Similar

7EN - TERMINAL PINOUT

TERMINAL	SECTION	ELEMENT	STATUS
PIN1 – G1	A	G1 – Control Grid	CONNECTED
PIN2 – IS	A	IS – Internal Screen	CONNECTED
PIN2 – K	A	K – Cathode	CONNECTED
PIN3 – H	–	H – Heater	CONNECTED
PIN4 – H	–	H – Heater	CONNECTED
PIN5 – P	A	P – Plate (Anode)	CONNECTED
PIN6 – G2	A	G2 – Screen Grid	CONNECTED
PIN7 – G3	A	G3 – Suppressor Grid	CONNECTED

SECTION RATINGS

SECTION1 Pentode	
PLATE RESISTANCE	110000 Ω
TRANSCONDUCTANCE	0.0034 S
AMPLIFICATION FACTOR	38
MAXIMUM PLATE VOLTAGE	300 V
MAXIMUM SCREEN VOLTAGE	300 V
MAXIMUM PLATE DISSIPATION	1.7 W
MAXIMUM SCREEN DISSIPATION	1 W
<i>Published ratings/characteristics promoted from supplied datasheet.</i>	

Miniature type used as sound-detector tube in FM and color and black-and-white television receivers. Tube has two independent control grids. Outlines section, 5C; requires miniature 7-contact socket. Type 5HZ6 is identical with type 6HZ6 except for heater ratings.



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1965 Westinghouse Data Book

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1965 WESTINGHOUSE DATA BOOK

Section 1 · Pentode

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Voltage	6.3 V	—
Heater Current	450 mA	—
Plate Resistance	110000 ohm	—
Grid1 Transconductance	3400 uS	—
Grid3 Transconductance	600 uS	—

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Maximum Plate Voltage	300 V	—
Maximum Plate Dissipation	1.5 W	—
Maximum Grid3 Positive Voltage	25 V	—
Maximum Grid3 Negative Voltage	-100 V	—
Maximum Screen Supply Voltage	300 V	—
Plate Voltage	150 V	—
Screen Voltage	100 V	—



1966 Tung Sol Electronic Tubes 2 of 4

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1966 TUNG SOL ELECTRONIC TUBES 2 OF 4

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate supply voltage	150 V	ClassA1
Grid 2 supply voltage	100 V	ClassA1
Cathode resistor	180 ohm	ClassA1
Plate current	3.2 mA	ClassA1
Grid 2 current	32 mA	ClassA1
Grid 3 negative voltage rating	100 V	FM sound detector
Grid 3 positive voltage rating	25 V	FM sound detector

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid 3 transconductance to plate	600 μ S	ClassA1
Heater warm-up time	11 s	WholeTube



SOURCE DATA APPENDIX

1971 RCA HB3 Binder 5 of 7

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1971 RCA HB3 BINDER 5 OF 7

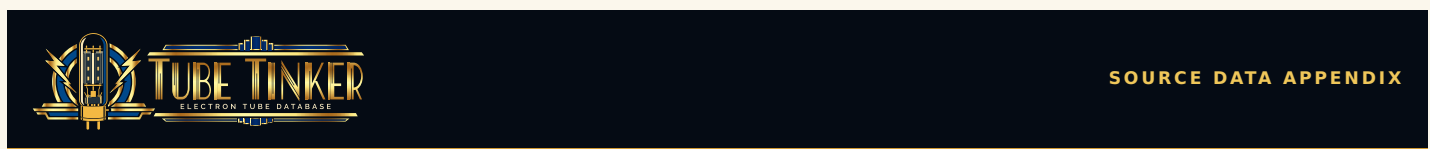
Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC)	6.3 V	Published table value column 1

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Voltage (AC or DC)	6.3 V	Published table value column 2
Voltage (AC or DC)	0.6 V	Published table value column 3
Current	450 mA	Published table value column 1
Current	30 mA	Published table value column 2
Current	450 mA	Published table value column 3
Warm-up time (Average)	11 s	Published table value
respect to cathode	200 V	Published table value
Grid No.1 to plate	0 pF	Published table value column 1
Grid No.1 to plate	23 pF	Published table value column 2
Grid No.1 to grid No	3 pF	Published table value column 1
Grid No.1 to grid No	0.09 pF	Published table value column 2
Grid No	3 pF	Published table value column 1
Grid No	1.6 pF	Published table value column 2
Plate Supply Voltage	150 V	Published table value
Grid-No	3 V	Published table value column 1
Grid-No	0 V	Published table value column 2
Grid-No	2 V	Published table value column 1
Grid-No	100 V	Published table value column 2
Grid-No.1 Supply Voltage	0 V	Published table value
Cathode Resistor	180 Ω	Published table value
Plate Current	3.2 mA	Published table value
Grid-No	2 mA	Published table value column 1
Grid-No	3.2 mA	Published table value column 2
for plate μ a =	20 V	Published table value column 1
for plate μ a =	-4.5 V	Published table value column 2
for plate μ a =	-7 V	Published table value column 2
PLATE VOLTAGE	300 V	Published table value
GRID-No	2 V	Published table value column 1
GRID-No	300 V	Published table value column 2
GRID-No	2 a	Published table value
GRID-No	3 W	Published table value column 1
GRID-No	0 W	Published table value column 2

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
GRID-No	1 W	Published table value column 3
PLATE DISSIPATION	1 W	Published table value column 1
PLATE DISSIPATION	7 W	Published table value column 2
Grid-No	3 MΩ	Published table value column 1
Grid-No	0.68 MΩ	Published table value column 2
For cathode-bias operation	0.47 MΩ	Published table value

CHARACTERISTICS		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Resistance (Approx)	0.11 MΩ	Published table value



SOURCE OPERATING CONDITIONS

[SOURCE PDF](#)

1975 RCA RC30

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1975 RCA RC30

Section 1 · Pentode

OTHER		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Heater Warm-up Time (Average)	11 seconds	Heater Warm-up Time (Average) 11 11 seconds
Grid No.1 to Cathode, Heater, Grid No	3	Grid No.1 to Cathode, Heater, Grid No.2, Grid No.3, and
Grid No	2	Grid No.3 to Cathode, Heater, Grid No.1, Grid No.2, Plate,
Plate Dissipation	1.7 watts	Plate Dissipation 1.7 watts
Grid-No	0.1 watt	Grid-No.3 Input 0.1 watt
Grid-No	2	Grid-No.2 Input:
Grid-No	0.68 megohm	Grid-No.3-Circuit Resistance 0.68 megohm
Heater Warm-up Time (Average)	11 seconds	Heater Warm-up Time (Average) 11 11 seconds
Peak Heater-Cathode Voltage ±	100 volts	Peak Heater-Cathode Voltage ±100 max ±100 max volts

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Dissipation	1.5 watts	Plate Dissipation 1.5 watts

CAPACITANCE		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Grid No.1 to Plate	0.023	Grid No.1 to Plate 0.023 pF
Grid No.1 to Grid No	0.09 pF	Grid No.1 to Grid No.3 0.09 pF
Grid No	1.6	Grid No.3 to Plate 1.6 pF
Grid to Plate	1.6 pF	Grid to Plate 1.6 1.6 pF
Grid to Cathode and Heater	2.6 pF	Grid to Cathode and Heater 2.2 2.6 pF
Plate to Cathode and Heater (Unit No.1)	1.6 pF	Plate to Cathode and Heater (Unit No.1) ... 0.4 1.6 pF
Plate to Cathode and Heater (Unit No	1 pF	Plate to Cathode and Heater (Unit No.2) 0.4 1 pF

CHARACTERISTIC		
PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
Plate Supply Voltage	150 volts	Plate Supply Voltage 150 volts
Grid-No	0 volts	Grid-No.3 Supply Voltage 0 volts
Grid-No	100 volts	Grid-No.2 Supply Voltage 100 volts
Grid-No.1 Supply Voltage	0 volts	Grid-No.1 Supply Voltage 0 volts
Plate Resistance (Approx.)	0.11 megohm	Plate Resistance (Approx.) 0.11 megohm
Transconductance, Grid No.1 to Plate	3400	Transconductance, Grid No.1 to Plate 3400 /imhos
Transconductance, Grid No	600	Transconductance, Grid No.3 to Plate 600 /xmhos
Plate Current	3.2 mA	Plate Current 3.2 mA
Grid-No	3.2 mA	Grid-No.2 Current 3.2 mA
Grid-No	-7 volts	Grid-No.3 Supply Voltage (Approx.) for plate current of 20 fiA -7 volts
Grid-No.1 Supply Voltage (Approx.) for plate current of	-4.6 volts	Grid-No.1 Supply Voltage (Approx.) for plate current of 20 /IA -4.6 volts
Plate Voltage	300 volts	Plate Voltage 300 volts
Grid-No	3	Grid-No.3 (Control-Grid) Voltage:
Grid-No	300 volts	Grid-No.2 (Screen-Grid) Supply Voltage 300 volts
Grid-No	300	Grid-No.2 Voltage See curve page 300

PARAMETER	PUBLISHED VALUE	CONDITION / NOTE
For grid-No	1 volts	For grid-No. 2 voltages up to 150 volts 1 watt
For grid-No	300 volts	For grid-No.2 voltages between 150 and 300 volts See curve page 300
Plate Voltage	300 volts	Plate Voltage 300 volts
Grid Voltage, Positive-bias value	0 volts	Grid Voltage, Positive-bias value 0 volts
Plate Voltage	100 volts	Plate Voltage 100 volts
Amplification Factor	38	Amplification Factor 38
Plate Resistance (Approx.)	7100 ohms	Plate Resistance (Approx.) 7100 ohms

TUBE TINKER

An independent reference for electronic tubes, vacuum tubes, and their source documents.

[Catalog](#) [Tube types](#) [Full books](#) [Blog](#) [Feedback & corrections](#)

© 2026 Tube Tinker